

PROCEEDINGS  
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TWO NEW MAMMALS FROM SUMATRA.

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In studying some of the collections made by Dr. W. L. Abbott and presented by him to the United States National Museum, I find two rats which represent forms not hitherto described. They may be known as:

***Rattus vociferans tapanulius*** new subspecies.

1903. *Mus fremens* Miller, Proc. U. S. Nat. Mus., vol. 26, p. 463, February 3, 1903. Not *Mus fremens* from Sinkep Island.

*Type specimen*.—No. 114453, U. S. Nat. Mus., skin and skull of adult male, collected at Tapanuli Bay, west coast of Sumatra, February 16, 1902, by Dr. W. L. Abbott; original number 1538.

*Geographic distribution*.—Known only from vicinity of Tapanuli and Tarussan Bays, but probably having a considerable range along the west coast of Sumatra.

*Diagnostic characters*.—Differs from *Rattus vociferans vociferans* of the Malay Peninsula and also of Aru Bay, Sumatra,\* in being decidedly duller in color, the dull zinc-orange colors of *vociferans* being replaced by cinnamon-buff; in other respects the two forms are essentially alike.

*Color*.—Upperparts and sides of head, neck and body and outside of legs, a mixture of cinnamon-buff and blackish brown; along the back the two colors about equally mixed or blackish slightly in excess, along sides of head, neck and body cinnamon-buff predominating. Tail dull drab-brownish, slightly lighter on underside and toward tip. At center of tail 7 scales per centimeter, each scale subtended by three light colored hairs, about one and one-half, or one and three-quarters scales in length.

*Skull and teeth*.—These show no essential differences from those of *Rattus vociferans vociferans*.

*Measurements*.—Type: Head and body, 236; tail, 375; hindfoot, 47;

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\* The Aru Bay specimens were identified by me as *Mus fremens* in 1908 (Proc. U. S. Nat. Mus., vol. 34, p. 647). I now regard them as very close if not identical with *Epimys vociferans*. None of them are fully adult.

condylobasal length, 51.5; zygomatic width, 25.6; braincase, 21; maxillary tooththrow, 10. Tail is always long, 350 mm. or over.

*Remarks.*—This subspecies is rather intermediate so far as its color is concerned between the typical form and *Rattus fremens*. In the possession of its long tail it is clearly related to *vociferans vociferans*.

*Specimens examined.*—Nine from Tapanuli Bay and one from Tarussan Bay.

### ***Rattus virtus* new species.**

1903. *Mus firmus* Miller, Proc. U. S. Nat. Mus., vol. 26, p. 461, February 3, 1903. Not *Mus firmus* from Linga Island.

1908. *Mus firmus* Lyon, Proc. U. S. Nat. Mus., vol. 34, p. 645, September 14, 1908. Not *Mus firmus* Miller from Linga Island.

*Type specimen.*—No. 144223, U. S. Nat. Mus., skin and skull of adult male, collected in eastern Sumatra, along Siak River, near mouth of Gasip River, December 10, 1906, by Dr. W. L. Abbott; original number 4944.

*Geographic distribution.*—Sumatra.

*Diagnostic characters.*—A member of the *Rattus firmus* group of rats distinguished from *R. firmus* chiefly by its more slender skull, especially pronounced in the rostral and interorbital regions.

*Color.*—The color of *Rattus virtus* is indistinguishable from that of its allies, *R. firmus*\* and *R. validus*.† Upperparts and sides of head, neck and body, and outside of legs a coarsely grizzled mixture of blackish brown and honey yellow (or color approximately that), the darker color somewhat in excess on the upper parts, and both colors about equally mixed on sides and legs; entire underparts including inner side of legs, ivory yellow, from base to apex of hairs.

*Pelage, etc.*—Without spines, but along the upperparts, especially lower back, rather thickly interspersed with rather long bristly hairs; tail with about nine scales per centimeter, each scale subtended by three hairs, scarcely longer than the scales.

*Skull and teeth.*—The skull is longer and relatively narrower, temporal beadings less lyrate, rostrum more slender than that of *R. firmus*. It is much smaller than that of *R. victor*.‡ In general characteristics it does not seem essentially different from that of *R. validus*. The teeth of *R. virtus* are not essentially different from those of *Rattus firmus* and *R. victor*, but are strikingly different from those of *R. validus* in being much narrowed and in lacking some small extra cusps on the outside of the upper tooththrow.

*Measurements.*—Head and body, 250 mm.; tail, 278; hind foot, 50; condylobasal length, 51.6; zygomatic width, 26.4; width of braincase, 19.3; maxillary tooththrow, 10.1.

*Specimens examined.*—One, the type.

\* Proc. Acad. Nat. Sci. Phila., 1902, p. 155, June 11, 1902.

† Proc. Biol. Soc. Wash., vol. 13, p. 141, April 21, 1900.

‡ Miller, Smiths. Misc. Coll., vol. 61, no. 21, p. 16, December 29, 1913.

*Remarks.*—*Rattus virtus* should also be compared with *R. mülleri* (Jentink).\* Mr. Miller's observations on this rat were published by me in 1908.† The hairs of the underparts in *R. mülleri* are described as gray. In *R. virtus* and its allies the hairs of the underparts are uniformly colored, whitish or ivory yellow. In *R. mülleri* the interpterygoid space is mentioned as extending distinctly further forward than the edge of the last molar, which is not the case in *R. virtus* and its allies.

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\* Notes Leyden Museum, vol. 2, p. 16, 1880.

† Proc. U. S. Nat. Mus., vol. 34, p. 646, September 14, 1908. *Mus bullatus* described in that paper is not a member of this group.